

## Responsible Care Management

Responsible Care (RC) activities aim to secure environment, health and safety (EHS) performance on a voluntary basis throughout the entire process, from the development of chemical substances, manufacture, distribution, use, final consumption and to disposal / recycle. These activities also serve as a form of communication with society through the announcement of their results. Chemical companies in more than 60 countries and regions are working on RC activities.

The global expansion of RC activities was triggered by the establishment of the International Council of Chemical Associations (ICCA) in 1989. In Japan, the Japan Responsible Care Council (JRCC) was established by the Japan Chemical Industry Association (JCIA) in 1995. We are one of the original members of JRCC. We have also signed the Responsible Care Global Charter, which was revised in 2014, and we are enhancing our efforts in RC activities.

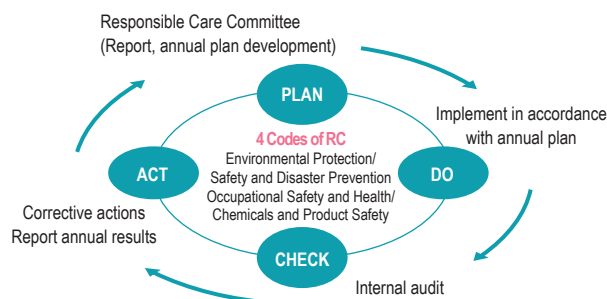
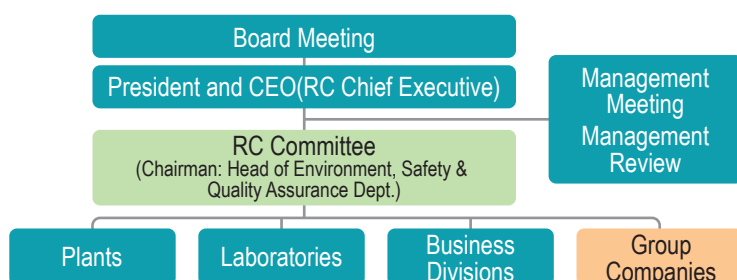
## Responsible Care Basic Policies

We have set priority matters related to the EHS in all stages of our business activities as our basic policies on RC. We have fully shared these basic policies with all group companies.

- (1) Strive to ensure the continuous improvement of the EHS throughout the entire product lifecycle, from development all the way to the final disposal.
- (2) Manage business activities and prevent them from affecting people and the environment, giving consideration to the EHS when transporting, storage and disposing products.
- (3) Strive to develop products and technologies with a smaller environmental impact by considering the EHS aspects from R&D phase.
- (4) Promote greater resource conservation and energy conservation to reduce the amount of waste and effectively use of the waste.
- (5) Take note of the interest of administrative authorities and public interest concerning the impact of our products and operations on EHS, and strive to communicate with them to ensure their correct and full understanding by disclosing sufficient information.
- (6) Further enhance risk assessment and risk management based on scientific knowledge and strengthen proper management of chemical substances.
- (7) Observe laws and standards and promote voluntary initiatives to further improve the EHS performance.
- (8) Fulfill accountability to further meet the expectations of stakeholders in Japan and overseas concerning our activities related to EHS.

## Nissan Chemical RC Management System

To achieve our RC mid-term plan (see right-hand page), we have established RC management system based on ISO14001, an international standard on environmental management system. We carry out target management and continuous improvements based on PDCA. All of our plants, laboratories, business divisions and group companies set their own mid-term plans and annual targets to achieve the plans. We have set up the RC Committee as the organization in charge of promoting these activities. It is chaired by the head of Environment, Safety & Quality Assurance Department, with its members being the officer in charge of Environment, Safety & Quality Assurance Department and heads of the Production Technology Department, Personnel Department, Purchasing Department, business divisions, plants and laboratories. At the committee's annual meeting, the members discuss the results of all activities, and the RC targets for the next fiscal year. The results of the discussions are reported at the management meeting and subject to management review before the RC targets for the next fiscal year are determined. In addition, all plants have obtained third-party certificate under ISO14001. Business divisions, laboratories, and group companies confirm the effectiveness of their management systems through internal RC audits.



## Promotion of the RC Mid-Term Plan (FY2016 – 2021)

We have set Responsible Care mid-term plan, a six-year plan that aims to steadily promote activities related to environmental protection and countermeasures to address climate change, safety and disaster prevention, occupational safety and health, and chemical and product safety. We will take specific forms of action by drawing up a plan for each fiscal year based on the RC mid-term plan.

Responsible Care Code	Mid-term plan (FY2016-2021)	FY2016 plan
Environmental protection and countermeasures to address climate change	<ul style="list-style-type: none"> <li>Reducing the energy consumption rate (achieving a 20% reduction from the year 2011 level by 2021)</li> <li>Reducing GHG emissions and improving the GHG emission rate                             <ul style="list-style-type: none"> <li>Reducing the total amount of emissions during the period of the mid-term plan (2016 to 2021) by 100,000 tons compared to the period of the previous mid-term plan (2010 to 2015)</li> <li>Improving the emission rate by 20% from the FY2011 level by FY2021</li> </ul> </li> <li>Reducing industrial waste</li> <li>Establishing a CSR supply chain management (green procurement) system</li> <li>Strengthening measures for protecting biodiversity</li> <li>Promoting the development and sales of environmentally friendly products</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation through the renewal of aging facilities</li> <li>Promoting the conversion of waste solvents into forms of fuel</li> <li>Switching from naphtha to natural gas as the feedstock for ammonia (Reducing GHG emissions by 10,000 tons)</li> <li>Promoting the reuse and recycling of waste</li> <li>Conducting EHS audits of important business partners</li> <li>Continuous activities based on biodiversity action guidelines</li> <li>Promoting the sale of environmentally friendly products</li> </ul>
Safety and disaster prevention	<ul style="list-style-type: none"> <li>Creating a safety culture and improving the safety capabilities</li> <li>Improving the effectiveness of the prior assessment systems for manufacturing, construction work, and improving the effectiveness of research</li> </ul>	<ul style="list-style-type: none"> <li>Optimizing the method for evaluating the safety culture</li> <li>Enhancing the risk assessment performed in prior assessment</li> </ul>
Occupational safety and health	<ul style="list-style-type: none"> <li>Establishing an occupational safety and health management system based on ISO45001</li> <li>Achieving zero accidents that require staff time off from work</li> </ul>	<ul style="list-style-type: none"> <li>Improving occupational safety through equipment improvement</li> <li>Publishing an occupational safety newspaper</li> <li>Strengthening inspections for occupational safety and health in RC audits</li> </ul>
Chemicals and product safety	<ul style="list-style-type: none"> <li>Promoting risk-based management throughout the lifecycle of chemical substances</li> <li>Contributing to advanced research that examines the impact of chemical substances on human health and the environment</li> </ul>	<ul style="list-style-type: none"> <li>Creating internal standards for the risk assessment of chemical substances and safety measures based on safety data</li> <li>Promoting the disclosure of safety summaries of chemical products</li> <li>Participating in LRI activities organized by the Japan Chemical Industry Association</li> </ul>

## Assessment of the RC Mid-Term Plan (FY2013-2015)

Field	Mid-term plan (FY2013-2015)	Achievement assessment
Environmental protection	<ul style="list-style-type: none"> <li>Reduce the amount of energy consumption and improve energy consumption rate - Ensure 1% reduction from the previous year</li> </ul>	☆☆☆ Although the amount of consumption increased, the energy consumption rate declined by 3% over three years
	<ul style="list-style-type: none"> <li>Achieve sustained reduction in the emissions of PRTR substances and hazardous substances</li> </ul>	☆☆☆ Emissions remained unchanged
Process safety and disaster prevention	<ul style="list-style-type: none"> <li>Continue to ensure safety and stable operations</li> </ul>	☆☆☆☆ Safe, stable operations were maintained
	<ul style="list-style-type: none"> <li>Eliminate serious accidents at plants related to waste water or exhaust gas</li> </ul>	☆☆☆☆ There were no accidents related to waste water or exhaust gas
	<ul style="list-style-type: none"> <li>Assess safety culture to for improve our process safety capability</li> </ul>	☆☆☆☆ Safety culture was assessed at all plants
	<ul style="list-style-type: none"> <li>Keep the number of environmental accidents down to zero</li> </ul>	☆☆☆☆ No environmental accidents occurred
Occupational safety and health	<ul style="list-style-type: none"> <li>Achieve zero accidents that require staff time off from work</li> </ul>	☆ There were four cases of accidents that require staff time off from work
	<ul style="list-style-type: none"> <li>Continuously achieved zero occupational accidents caused by violation of rules</li> </ul>	☆ There were three cases of occupational accidents caused by violation of rules
Chemicals and product safety	<ul style="list-style-type: none"> <li>Upload GPS/JIPS Safety Summary</li> </ul>	☆☆☆☆ Started from FY2015
	<ul style="list-style-type: none"> <li>Respond to chemicals management regulations without delay</li> </ul>	☆☆☆☆ We have established risk assessment methods and internal systems
Compliance	<ul style="list-style-type: none"> <li>Make sure to obtain and share information about legal regulations related to EHS</li> </ul>	☆☆☆☆ We obtained the information without delay and made it available throughout the company
	<ul style="list-style-type: none"> <li>Promote understanding of information about laws and regulations related to EHS and ensure they are followed</li> </ul>	☆☆☆☆ We held an internal on-site seminar on the internal rules There were no cases of serious accidents

## Responsible Care Audits

RC audit checks whether the RC activities in offices are carried out appropriately, checks whether the PDCA cycle is implemented without fail to clarify visible or potential problems related to the EHS and promotes improvements in response after clarifying the problems if there are any. The audit is conducted by Environment, Safety & Quality Assurance Department in accordance with the annual audit plan formulated at the beginning of each fiscal year, and in accordance with the RC audit guidelines. In FY2015, a total of 36 audits were conducted as planned, the details of which are summarized below.



Subject	Date	Subject	Date	Subject	Date
Sodegaura Plant	6/16,12/1	Nissei Corporation	7/22	NCA [U.S.A.]	11/12,11/13
Saitama Plant	7/8,1/19	Nissan Engineering, Ltd. Head Office	5/14	NCE [France]	9/3
Toyama Plant	6/12,12/21,12/22	Nissan Engineering, Ltd. Toyama	5/12	NCK [Korea]	11/26
Nagoya Plant	6/26,2/5	Nihon Hiryo Co., Ltd. Shinmachi Plant	6/23,11/20	NCT [Taiwan]	2/24
Onoda Plant	6/12,1/29	Nihon Hiryo Co., Ltd. Handa Plant	6/5,12/4		
Chemical Research Laboratories	7/10,2/10	Nissan Green & Landscape Co., Ltd.	5/19		
Materials Research Laboratories Funabashi	8/6,1/22	Environmental Technical Laboratories, Ltd.	5/26		
Materials Research Laboratories Toyama	8/4,2/16	Nissan Butsuryu Co., Ltd.	6/9,11/24,		
Materials Research Laboratories Sodegaura	7/16,2/18		11/25,12/9		
Biological Research Laboratories	8/21,2/3				

## Environmental Load from Production Activities

The figure below shows the inputs of raw materials, energy and water for production and emissions to the atmosphere, waters, soil and waste.

